Rehabilitation Protocol for Arthroscopic Partial Meniscectomy

This protocol is intended to guide clinicians through the post-operative course for Arthroscopy Partial Meniscectomy. This protocol is time based (dependent on tissue healing) as well as criterion based. Specific intervention should be based on the needs of the individual and should consider exam findings and clinical decision making. The timeframes for expected outcomes contained within this guideline may vary based on surgeon’s preference, additional procedures performed, and/or complications. If a clinician requires assistance in the progression of a post-operative patient, they should consult with the referring surgeon.

The interventions included within this protocol are not intended to be an inclusive list. Therapeutic interventions should be included and modified based on the progress of the patient and under the discretion of the clinician.

Post-operative considerations
Post-operative considerations If you develop a fever, intense calf pain, excessive drainage from the incision, uncontrolled pain or any other symptoms you have concerns about you should call your doctor.

**PHASE I: IMMEDIATE POST-OP (Day 0-7 AFTER SURGERY)**

<table>
<thead>
<tr>
<th>Rehabilitation Goals</th>
<th>Walking</th>
<th>Swelling Management</th>
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<tbody>
<tr>
<td>• Reduce swelling, minimize pain</td>
<td>• Weight bearing as tolerated with crutches</td>
<td>• Ice, compression, elevation</td>
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<tr>
<td>• Restore knee range of motion (ROM)</td>
<td>• Weaning from crutches may occur in the first several days depending on appropriate resolution of edema, achievement of excellent quad activation (evidenced by ability to perform SLR), and proper gait pattern under the guidance of the physical therapist</td>
<td>• Ankle pumps</td>
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<tr>
<td>• Re-establish quadriceps activation</td>
<td>• When climbing stairs, lead with non-surgical limb and when going down the stairs, lead with the surgical limb</td>
<td>• Retrograde massage</td>
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<td>• Patient Education:</td>
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<tr>
<td>o Keep your knee straight and elevated when sitting or laying down. Do not rest with a towel placed under the knee</td>
<td></td>
<td>Range of motion/Mobility</td>
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<td>o Avoid painful activities</td>
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<td>• Patella mobilizations: superior/inferior and medial/lateral</td>
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<td>o Limit excessive walking</td>
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<td>• Heel slides with towel</td>
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<td></td>
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<td>• Low intensity, long duration extension stretches: prone hang, heel prop</td>
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<td></td>
<td></td>
<td>• Seated gastrocnemius and hamstring stretch</td>
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<td></td>
<td>• Stationary bike</td>
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<td></td>
<td></td>
<td>Strengthening</td>
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<td></td>
<td></td>
<td>• Calf raises</td>
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<tr>
<td></td>
<td></td>
<td>• Quad sets</td>
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<td></td>
<td></td>
<td>• Hip abduction</td>
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<td></td>
<td></td>
<td>• Straight leg raise</td>
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<td></td>
<td></td>
<td>• Sidelying Clamshell</td>
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</tbody>
</table>
Include NMES as needed: NMES high intensity (2500 Hz, 75 bursts) supine knee extended 10 sec/50 sec, 10 contractions, 2x/week during sessions—use of clinical stimulator during session, consider home units distributed immediate post op, can also include functionally into above

**Criteria to Progress**
- Knee ROM of 0–90 deg
- Ability to perform SLR (straight leg raise) with appropriate quadriceps activation

**PHASE II: INTERMEDIATE POST-OP (Day 8 – WEEK 2 AFTER SURGERY)**

### Rehabilitation Goals
- Achieve full pain free ROM
- Restore muscular strength and endurance
- Gradual return to functional activities while monitoring symptoms response
- Restore normal gait without assistive device
- Improve balance and proprioception

### Weight Bearing
- Weight bearing as tolerated
  - Goal to discharge assistive devices

**Additional Intervention**
*Continue with Phase I interventions*

**Range of motion/Mobility**
- Stretching of all muscle groups: prone quad stretch, standing quad stretch, standing hip flexor stretch

**Strengthening**
- Standing hamstring curls
- Step ups and step ups with march
- Partial squats
- Wall slides, ball squats
- Lumbo pelvic strengthening: bridge & unilateral bridge, bridges on physioball, bridges on physioball with roll-in
- Heel raises
- Leg press/shuttle press machine

**Balance/proprioception**
- Single leg standing balance (knee slightly flexed) static progressed to unsteady surface

**Criteria to Progress**
- Full and pain free knee ROM
- No swelling (Modified Stroke Test)
- Symmetrical, non-antalgic gait pattern without assistive device
• Progress intensity (strength) and duration (endurance) of exercises

**The following exercises to focus on proper control with emphasis on good proximal stability
• Lateral step down
• Squat to chair
• Lateral lunges
• Romanian deadlift and Single leg deadlift
• Single leg progression: partial weight bearing single leg press, slide board lunges: retro and lateral, step ups and step ups with march, split squats, lateral step-ups, step downs, single leg squats, single leg wall slides

**Balance/proprioception
• Progress single limb balance including perturbation training
• Lower quarter reaches (Y-Balance and Star drill)

**When Quadriceps index > 80% strength:
• Interval running program
  o Return to Running Program
• Progress to plyometric and agility program
  o Agility and Plyometric Program

Criteria to Progress

• No swelling/pain after exercise
• Ability to perform ADLs pain free

**If patient is returning to impact activities:
• 10 repetitions single leg squat proper form through at least 60 deg knee flexion
• Drop vertical jump with good control
• Completion of jog/run program without pain/swelling
• Functional Assessment
  o Quadriceps index >80%; HHD mean preferred (isokinetic testing if available)
  o Hamstring, glut med, glut max index ≥80%; HHD mean preferred (isokinetic testing for HS if available)
  o Single leg hop test ≥75% compared to contra lateral side

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**PHASE IV: UNRESTRICTED RETURN TO SPORT (9-12 WEEKS AFTER SURGERY)**

**Rehabilitation Goals**

• Maintain full ROM
• Safely progress strengthening
• Promote proper movement patterns
• Avoid post exercise pain/swelling
• Return to all necessary and desired functional activities, work duties, and athletic activities

**Additional Interventions as applicable to athlete:**

*Continue with Phase I-III interventions*

• Multi-plane sport specific plyometrics program
• Multi-plane sport specific agility program
• Include hard cutting and pivoting depending on the individuals’ goals

**Criteria for Discharge**

• Last stage, no additional criteria

**Return-to-Sport**

• Functional Assessment
  o Quadriceps index >95%; HHD mean preferred (isokinetic testing if available)
  o Hamstring, glut med, glut max index ≥95%; HHD mean preferred (isokinetic testing for HS if available)
  o Single leg hop test ≥95% compared to contra lateral side with proper landing mechanics
  o KOOS-sports questionnaire >90%, or other PRO as indicated

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Contact | Please email MGHSportsPhysicalTherapy@partners.org with questions specific to this protocol

References:


